

### ABSTRACT

A deep fat fryer is provided having a control system operatively connected to a temperature sensor circuit and to a heater control. The control system is adapted for thermostatically activating the heating element in response to a temperature signal from a temperature sensor circuit representing a sensed temperature at or below a lower limit value and deactivating the heating element in response to a temperature signal from the temperature sensor circuit representing a sensed temperature at or above an upper limit value. The control system, while the heating element is active, is further adapted for generating a first food lowering command signal for loading food in response to a temperature signal from the temperature sensor circuit representing a first predetermined sensed temperature below said upper limit value, and for generating a second food lowering command signal for immersion of food in the cooking liquid in response to a temperature signal from the temperature sensor circuit representing a second predetermined sensed temperature below said upper limit value but greater than said first predetermined sensed temperature. The generation of such food lowering command signals commanding the loading and lowering of food to the cooking medium in response to the sensed temperatures below the upper limit value of the cooking medium temperature at which the heater is deactivated and while the heating element is active supports optimal timing of the lowering of the food into the cooking medium, so that the temperature drop is minimized while the risk of temperature overshoot is avoided or at least reduced.